EXERCISE□BASED INTERVENTION TO PREVENT EXCESSIVE GESTATIONAL WEIGHT GAIN: A RAN□ DOMIZED CONTROLLED TRIAL

R Barakar[1], M. Pelaez[1], C. Lopez[1], Y. Cordero[1], M. Perales[1], A. Lucia[2], J. Ruiz[3]

[1]Facultad de Ciencias de la Actividad Física y del Deporte-INEF. Universidad Politécnica de Madrid, Spain

[2]Universidad Europea de Madrid, Spain,

[3]PROFITH "PROmoting FITness and Health through physical activity" research group, Department of Physical Education and Sports, School of Sport Sciences, University of Granada, Spain

Background and objectives: We aimed to examine the c□ect of moderate-intensity exercise-based intervention performed from the 9th week of pregnancy on maternal weight gain. Methods. A total of 962 healthy gravidae were randomly assigned to either a standard care or exercise intervention group. □ e intervention included moderate-intensity aerobic and resistance exercises performed 3 times per week (50-55 minutes per session). Women were categorized according to their pre-pregnancy body mass index (BMI) into normal-weight (n=687) and overweight/obese (n=275) groups. Excessive gestational weight gain was calculated on the basis of the 2009 IOM recommendations. Gestational body weight gain was calculated on the basis of the pregravid weight and weight at the last clinic visit before delivery.

Results: Women in the intervention group gained less weight (adjusted mean di□erence 1.039 kg, 95%CI: 0.534-1.545, P = 0.00001) and were less likely to gain weight above the IOM recommendations (OR: 0.625, 95%CI: 0.461-0.847, P = 0.002) than women who received standard care. Main treatment e□ects by BMI category revealed that normal-weight women in the intervention group gained less weight (adjusted mean di□erence 1.393 kg, 95%CI: 0.813-1.972, P = 0.00003) and were less likely to gain weight above the IOM recommendations (OR: 0.508, 95%CI: 0.334-0.774, P = 0.002) than normal-weight women who received standard care. No significant effect was observed in overweight/obese women, yet normal-weight women were less likely to gain weight above the IOM than overweight/obese women (OR: 0.247, 95%CI: 0.145-0.422, P < 0.000001).

Conclusions: Exercise of moderate-intensity performed over the second-third trimesters of pregnancy can be used to prevent excessive gestational weight gain in normal-weight women.